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WATER SUPPLY OUTLOOK OF AGRICULTURAL LIBRARY FOR MONTANA

MAY 22 1967

CURRENT SERIAL RECORDS

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE, and MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report. APR. 1, 1967

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Listed below are water supply outlook reports based on Federal-State-Private Cooperative snow surveys. Those published by the Soil Conservation Service may be obtained from Soil Conservation Service, Room 507, Federal Building, 701 N. W. Glisan, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83701
Montana	P. O. Box 855, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4001 Federal Building, Salt Lake City, Utah 84111
Washington	840 Bon Marche Bldg., Spokane, Washington 99206
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

WATER SUPPLY OUTLOOK

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

For

MONTANA

Report Prepared

Ву

Phillip E. Farnes Snow Survey Supervisor

And

Stanley E. Cook
Assistant Snow Survey Supervisor

Snow Survey and Water Supply Forecasting Unit Soil Conservation Service Box 98 Bozeman, Montana

Issued By

A. B. Linford State Conservationist Soil Conservation Service Bozeman, Montana J. A. Asleson, Director Montana Agricultural Experiment Station Bozeman, Montana



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MONTANA WATER SUPPLY OUTLOOK April 1, 1967

West of the Divide the mountain snow pack remains maximum to third highest of record in the higher elevations of the Flathead and Kootenai river drainages. Median elevations are represented by second to fifth highest of record. Low elevation snow is generally near or above average in these drainages. In the Clark Fork and Bitterroot drainages the snow pack is a little above average with near average elevation distribution of the snow pack. Some courses on the east and north edges of the Blackfoot drainage have high snow pack, comparable to that of the Flathead.

East of the Divide the high elevation snow pack is near maximum amounts in the Gallatin, Sun, Teton and St. Mary drainages. Also in the Castle, Little Belt, Belt and Snowy mountains in central Montana and the Absaroka and Beartooth Ranges in the Yellowstone river drainage. Median elevation and low elevation snow is generally above average in all of these areas.



Except for a few isolated spots, the mountain snow is a little above average in the Jefferson and Madison river drainages.

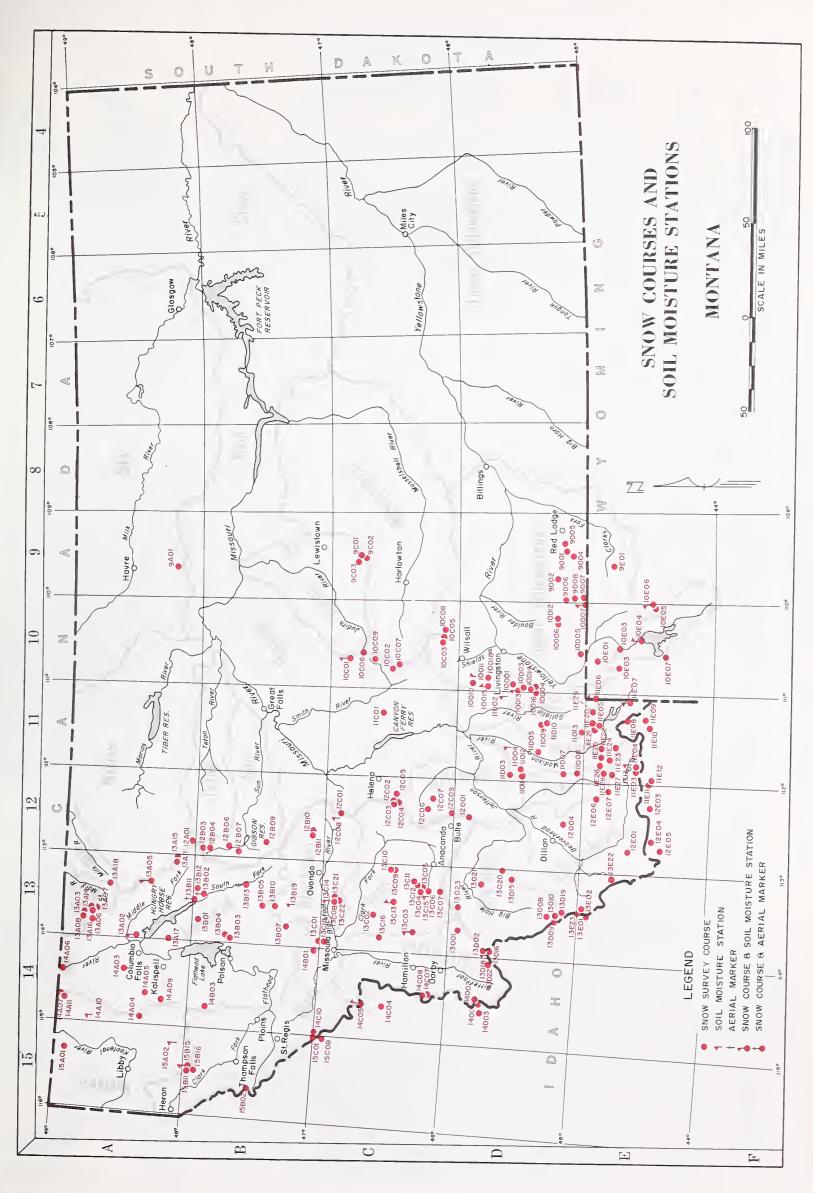
The snow is extremely dense over the entire state for this time of year and will delay high elevation runoff.

April through September streamflow west of the Divide is forecast well above average on Kootenai streams with the flow past the Leonia station expected to measure the second highest volume in the past 30 years. The Flathead streams are also forecast to produce their second to third largest volume. Except for the Blackfoot river, which is forecast about 20 percent above average, streams in the Clark Fork and Bitterroot drainages are in the near to 10 percent above average range. Late season irrigation supplies are expected to be near to above average.

The runoff volume from the Gallatin and St. Mary rivers is expected to be the largest of the past 30 years. Other Missouri drainage streams with headwaters in the heavy snow pack areas are forecast to produce second to fifth largest runoff of the past 30 years. Runoff from streams in the Jefferson drainage is expected to be around 10 percent above average. In the Yellowstone river drainage, streams originating in the Absaroka and Beartooth Ranges are forecast at the third to fourth highest volume runoff, while other streams tributary to the Yellowstone will produce above average flow. Late season irrigation supplies are expected to be above average on all streams except for near average on Jefferson river tributaries and Clarks Fork of the Yellowstone.

All irrigation reservoirs are expected to fill. Many of the larger multipurpose reservoirs have below average storage and will be able to absorb much of the runoff.

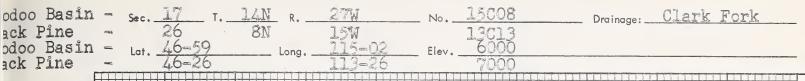


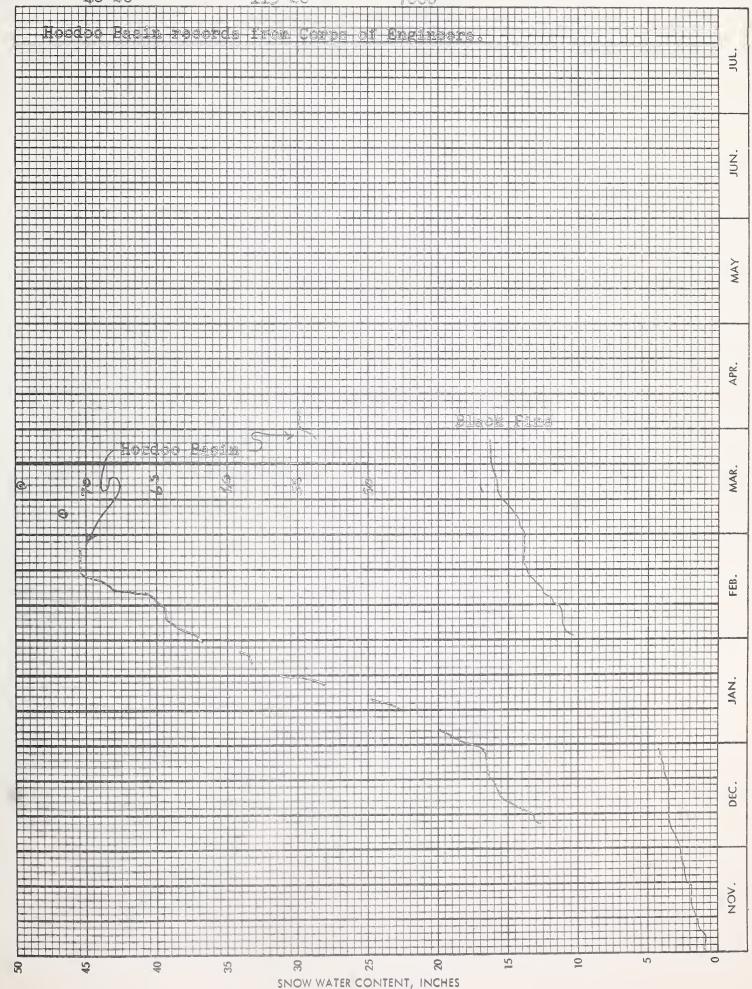


INDEX to MONTANA SNOW COURSES and SOIL MOISTURE STATIONS

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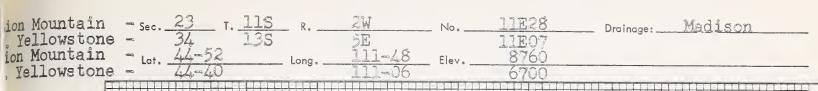
HOODOO BASIN & BLACK PINE SNOW PILLOW DATA

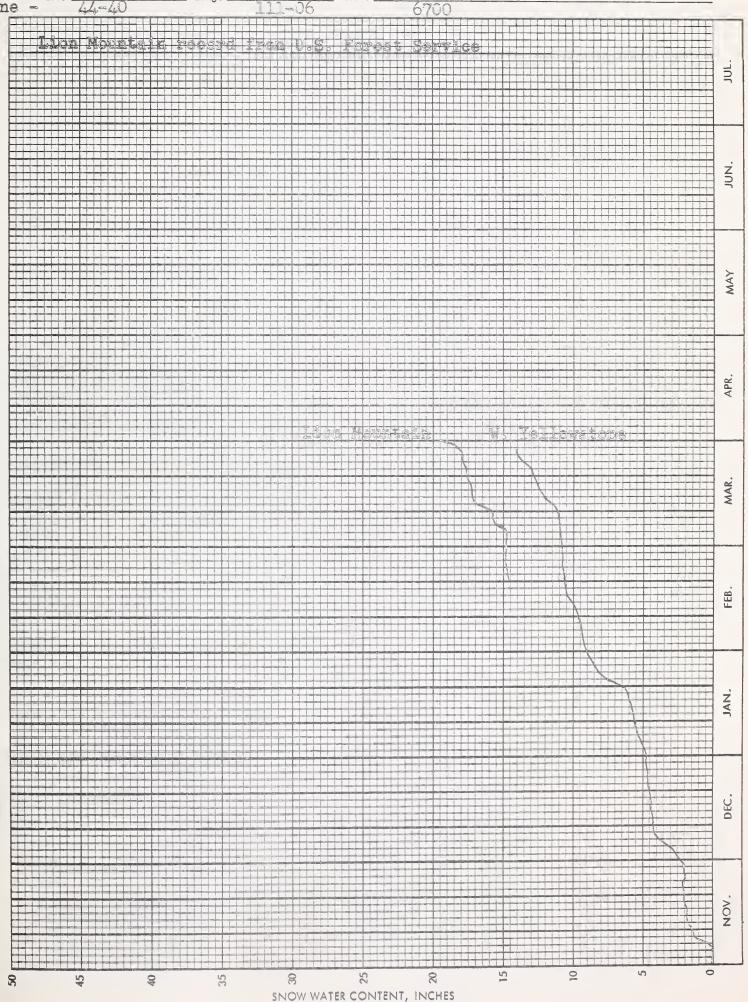






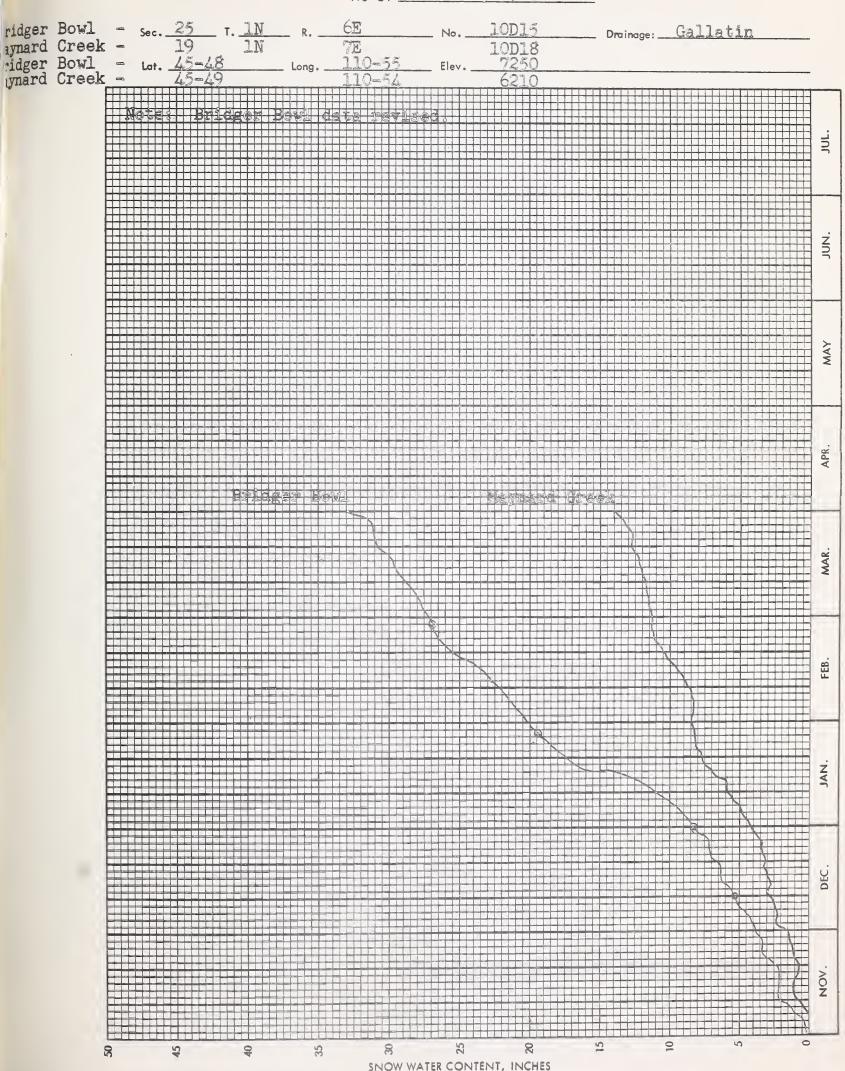
LION MOUNTAIN & W. YELLOWSTONE SNOW PILLOW DATA







BRIDGER BOWL & MAYNARD CREEK SNOW PILLOW DATA





CARROT BASIN & TAYLOR PEAKS SNOW PILLOW DATA

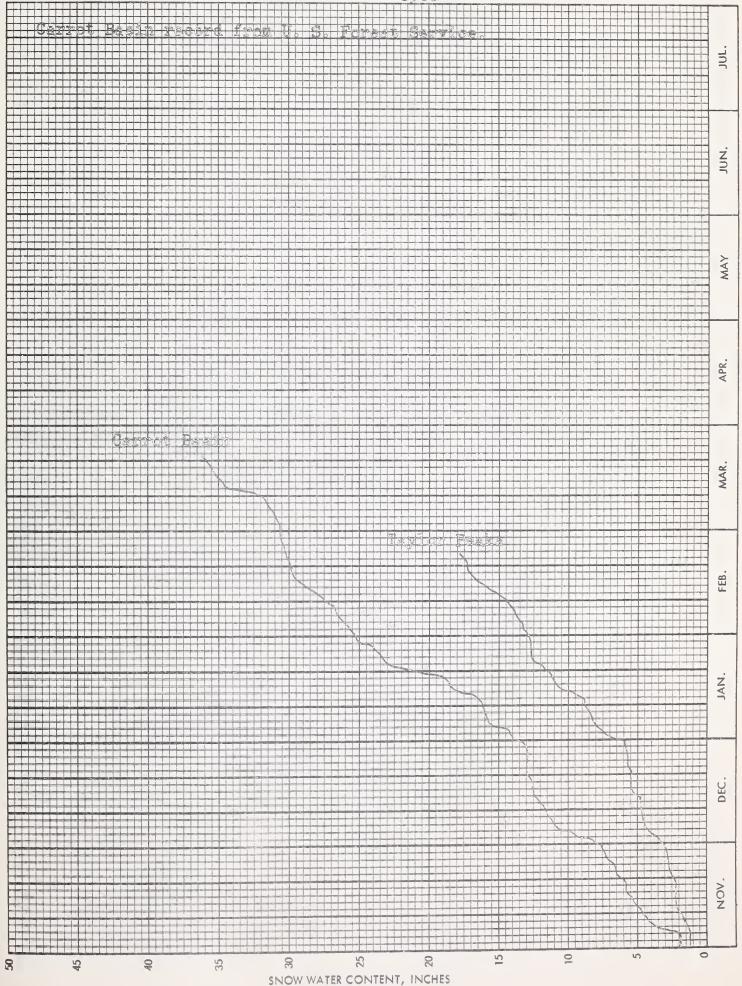
AS OF APRIL 1, 1967

 Carrot Basin - Sec.
 18 T.
 10S R.
 4E
 No.
 11E29
 Drainage:
 Gallatin

 Taylor Peaks 26 9S 2E
 11D13

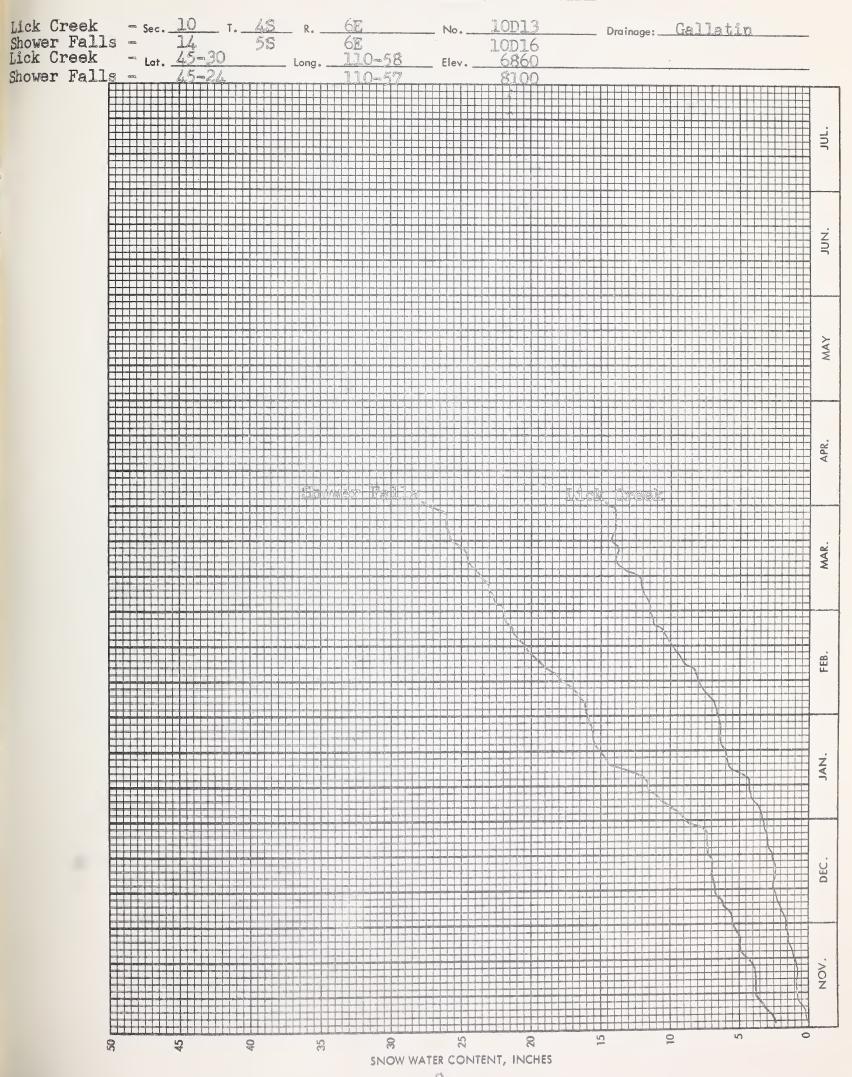
 Carrot Basin - Lat.
 44-58 Long.
 111-58 Elev.
 9000

 Taylor Peaks 45-01
 111-27 8500





LICK CREEK & SHOWER FALLS SNOW PILLOW DATA



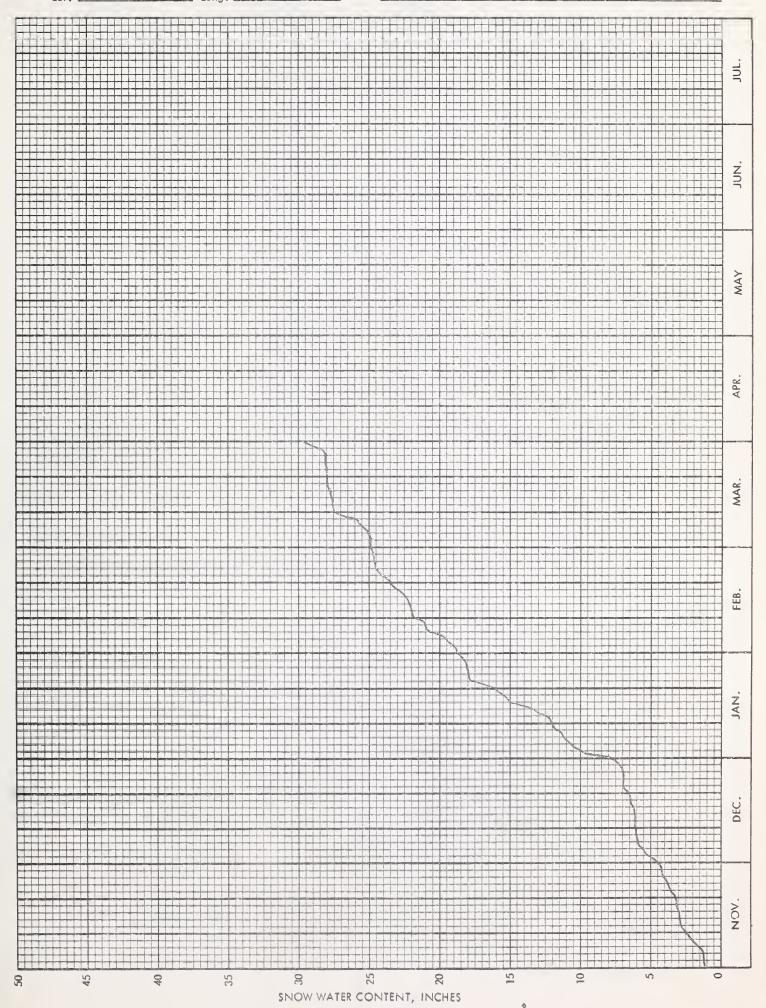


SPUR PARK SNOW PILLOW DATA

AS OF APRIL 1, 1967

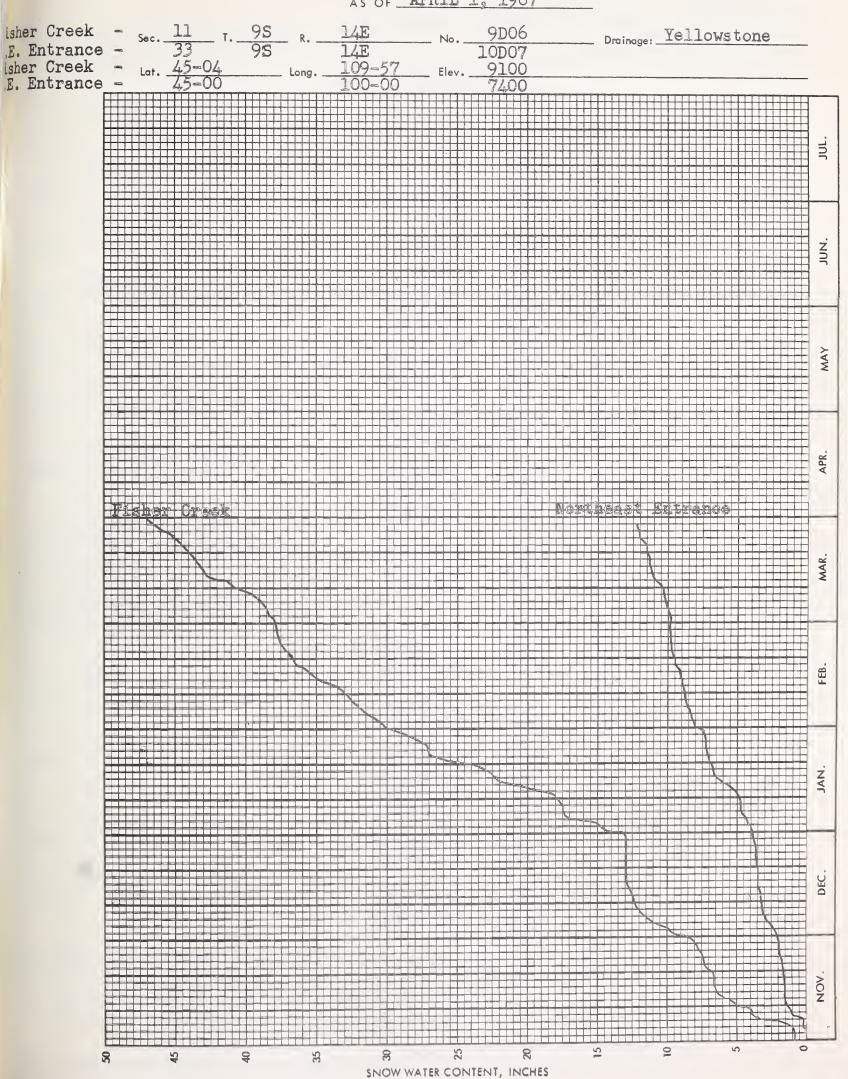
Sec. 20 T. 12N R. 9E No. 10C06 Drainage: Judith

Lat. 46-47 Long. 110-37 Elev. 8000





FISHER CREEK & N.E. ENTRANCE SNOW PILLOW DATA





AS OF APRIL 1, 1967

	AS OF AF	TIL 1, 190/			(1000	Acre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	COI	UMBIA RIVER	BASIN			
	FISHER RIVER					
3020	Jennings (near)	Apr-Sept	360	113	247	318
3020	semmings (mear)	Apr-July	342	113	234	302
	KOOTENAI RIVER	aspi early		کی ملک مالہ	~ 14	202
3030	Libby (at)	Apr-Sept	10300	127	7929	8096
		Apr-July	8900 :	127	6998	7010
	YAAK RIVER					
3045	Troy (near)	Apr-Sept	680	122	564	555
	TAGE TO STATE OF THE PARTY OF T	Apr-July	650	122	545	532
00 = 0	KOOTENAI RIVER	1 - 10 - 1	37/00	701	0757	0202
3050	Leonia (at)	Apr-Sept	11600	124	9176	9327
	TI THE COURT	Apr-July	10250	125	8156	8179
3301	FLINT CREEK Boulder Creek (below)(3)	Apr-Sept	72.8	100	47.3	73.0
2202	postder cleer (perca)(2)	Apr-July	59.0	100	35.8	59.1
	MIDDLE FORK ROCK CREEK	uhr arra	27.00	200	2700	2762
3320	Philipsburg (near)	Apr-Sept	85.0	109	43.8	77.8
		Apr-July	77.0	109	39.2	70.5
	BLACKFOOT RIVER		÷ .			
3400	Bonner (near)	Apr-Sept	1220	118	717	1036
		Apr-July	1100	118	646	938
		Apr-June	960	118	569	812
0101	CLARK FORK RIVER		200	3.00	/ 62	900
3404	Milltown (above)(4)	Apr-Sept	820	102	483	802
		Apr-July	720	102	412	705 605
	OI ADV HODY DIVIND	Apr-June	618	102	356	009
3405	CLARK FORK RIVER Missoula (above)	Apr-Sept	2040	111	1203	1838
240)	Missoura (apove)	Apr-July	1820	111	1064	1642
		Apr-June	1578	111	931	1417
	WEST FORK BITTERROOT RIVER	whr agric	20,0	23 22 22	70-	
3425	Conner (near) (5)	Apr-Sept	193	108	74	179
34~7		Apr-July	181	108	69	168
	BITTERROOT RIVER	20/22 0 0000				
3440	Darby (near)	Apr-Sept	590	101	273	582
- 4 4 -		Apr-July	550	101	240	542
		Apr-June	485	101	216	478
	BLODGETT CREEK	\$				
3475	Corvallis (near)	Apr-Sept	45.0	101	30.2	44.6
		Apr-July	43.0	101	29.2	42.6
	BITTERROOT RIVER	9				
3528	Missoula (at)(6)	Apr-Sept	1510	97	813	1553
		Apr-July	1410	97	750	1446
		Apr-June	1220	97	677	1253
(3) 0	The This A	- J Dess Jam C	mook at M	la vari 112		

(3) Sum, Flint Creek at Maxville and Boulder Creek at Maxville.

(5) Adjusted for storage in Painted Rocks Reservoir.

⁽⁴⁾ Difference in observed flow, Clark Fork above Missoula and Blackfoot near Bonner.

⁽⁶⁾ Difference in observed flow, Clark Fork above and below Missoula.



					(1000 Acre Feet)				
		FORECAST	FORECAST	PERCENT	MEASURE	D FLOW			
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE			
	CLARK FORK RIVER								
3530	Missoula (below)	Apr-Sept	3550	105	2016	3391			
	, , , ,	Apr-July	3235	105	1814	3088			
		Apr-June	2798	105	1608	2670			
	CLARK FORK RIVER	3800. 00210	2170	200	1000	2010			
3545	St. Regis (at)	Apr-Sept	4700	101	3000	4642			
33.47		Apr-July	4275	101	2703	4230			
		Apr-June	3710	101	2357	3671			
	NORTH FORK FLATHEAD RIVER	,	3 V 3			2			
3555	Columbia Falls (near)	Apr-Sept	2570	127	1878	2027			
3333	Oordinard I draw (madi	Apr-July	2340	127	1709	1844			
		Apr-June	1990	127	1452	1565			
	MIDDLE FORK FLATHEAD RIVER	uhr ama	2110	2∞;	and the second	£) O)			
3585	West Glacier (near)	Apr-Sept	2300	120	1755	1923			
0000		Apr-July	2140	120	1633	1785			
		Apr-June	1830	120	1404	1521			
	SOUTH FORK FLATHEAD RIVER	whi_a mie	2030	120	THOR	1.16.2			
3625	Columbia Falls (near)(7)	Apr-Sept	2900	122	2004	2381			
JUNG	Octomora Latra (meer) (1)	Apr-July	2760	122	1910	2262			
		3		122	1708	1988			
	FLATHEAD RIVER	Apr-June	2430	166	7100	1700			
3630		Ann-Sont	7960	122	5670	6497			
2020	Columbia Falls (at)(7)	Apr-Sept	7360	122	5284	6028			
		Apr-July							
	ATTAX DITTER	Apr-June	6370	123	4601	5185			
2740.0	SWAN RIVER		40.0	7.00	~~!	(0)			
3700	Big Fork (near)	Apr-Sept	890	128	594	694			
		Apr-July	785	128	526	614			
		Apr-June	640	128	431	503			
	FLATHEAD RIVER								
3720	Polson (near)(8)	Apr-Sapt	9650	124	6841	7778			
	· · · · · · · · · · · · · · · · · · ·	Apr-July	8960	124	6399	7229			
		Apr-June	7670	124	5519	6188			
	CLARK FORK RIVER	చ							
3890	Plains (near)(8)	Apr-Sept	14750	115	9968	12793			
		Apr-July	13500	115	9175	11736			
		Apr-June	11600	115	7942	10077			
	THOMPSON RIVER								
3895	Thompson Falls (near)	Apr-Sept	314	104	212	302			
	· · · · · · · · · · · · · · · · · · ·	Apr-July	284	104	186	273			
	PROSPECT CREEK	anga wag							
3907	Thompson Falls (at)	Apr-Sept	173	105	124	165			
	and the the Total of the	Apr-July	163	105	115	155			
	CLARK FORK RIVER	espa & was		EE # /					
3920	Whitehorse Rapids (at)(9)	Apr-Sept	16500	114	11474	14398			
7.10	""" and a second of the second	Apr-July	15000	114	10516	13187			
		Apr-June	12850	114	9089	11318			
		TOPE OWIN							

⁽⁷⁾ Adjusted for storage in Hungry Horse Reservoir.
(8) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

⁽⁹⁾ Adjusted for storage in Hungry Horse, Flathead Lake and Noxon Rapids Reservoirs.

⁼¹²⁼



(1000 Acre Feet)

					(1000	Acre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	D FLOW
10.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	MI	SSOURI RIVER	BASIN			
	RED ROCK RIVER					
0110	Kennedy Ranch (at)	Apr-Sept Apr-July	90.0 83.0	125 125	50.2 47.6	71.7 66.2
0125	RED ROCK RIVER Monida (near)(11)	Apr-Sept	99.0	126	55.1	784
	RUBY RIVER	Apr-July	93.0	126	53.6	73.7
0195	Alder (near)	Apr-Sept	98.0 81.7	123 123	60.6 51.4	79.6 66.4
0077	BIG HOLE RIVER			٠		
0255	Melrose (near)	Apr-Sept Apr-July	780 729	109 109	300 280	718 669
0330	BOULDER RIVER Boulder (near)	Apr-Sept	84.0	110	53.2	76.3
0215	JEFFERSON RIVER	Apr-July	80.5	110	51.6	73.0
0345	Sappington (at)(12)	Apr-Sept Apr-July	1080 970	111	331 304	974 875
0375	MADISON RIVER West Yellowstone (near)	Apr-Sept Apr-July	244 184	117 117	195 145	208 157
0385	MADISON RIVER Grayling (near)(13)	Apr-Sept	495	118	378	420
	MADISON RIVER	Apr-July	389	118	287	330
0410	McAllister (near) (14)	Apr-Sapt Apr-July	905 726	126 126	620 477	718 576
0435	GALLATIN RIVER Gateway (near)	Apr-Sept	625	140	389	447
	BRIDGER CREEK	Apr-July	533	140	329	381
0485	Bozeman (near)	Apr-Sept Apr-July	31.0 29.2	156 156	17.6 16.6	19.9 18.7
0500	HYALITE CREEK Bozeman (near)(15)	Apr-Sept	50.8	143	37.6	35.6
	GALLATIN RIVER	Apr-July	44.0	143	32.5	30.8
0525	Logan (at)	Apr-Sept Apr-July	732 622	157 157	320 262	467 396

⁽¹¹⁾ Adjusted for storage in Lima Reservoir.

⁽¹²⁾ Adjusted for storage in Clark Canyon Reservoir. (13) Adjusted for storage in Hebgen Lake.

⁽¹⁴⁾ Adjusted for storage in Hebgen and Ennis Lakes.

⁽¹⁵⁾ Adjusted for storage in Middle Creek Reservoir.

⁻¹³⁻



		FORECAST	5000000			Acre Feet)
NO.	RIVER AND FORECAST POINT	PERIOD	FORECAST THIS YEAR	PERCENT	MEASURE	7
	MISSOURI RIVER		THIS TEAK	AVERAGE	LAST YEAR*	AVERAGE
0545	Toston (at)(16)	Apr-Sept Apr-July	2600 2250	121 121	1119 966	2147 1861
	PRICKLY PEAR CREEK	ipi oui,	~~) 0	1~1	900	1001
0615	Clancy (near)	Apr-Sept Apr-July	25.0 21.7	114 114	15.5 13.5	22.0 19.2
0770	SHEEP CREEK W. Sulphur Springs (near)	Apr-Sept Apr-July	29.0 25.0	176 176	19.1 16.4	16.5 14.2
0786	SUN RIVER Gibson Dam (at)(17)	Apr-Sept Apr-July	730 670	120 120	450 412	610 559
0908	MISSOURI RIVER Fort Benton (at)(18)	Apr-Sept	4000	120	4¢±€	3319
0,00	TWO MEDICINE CREEK	Apr-July	3390	120		2825
0920	Browning (near)(19)	Apr-Sept	320 307	118 118	208 197	271 260
0005	BADGER CREEK	Apr-July			·	
0925	Browning (near)	Apr-Sept Apr-July	165 143	115 115	107 91	143 124
0990	CUT BANK CREEK Cut Bank (at)	Apr-Sept Apr-July	147 135	112 112	89.2 82.0	131 120
0995	MARIAS RIVER Shelby (near)(20)	Apr-Sept Apr-July	730 690	112 112	435 407	651 617
1095	MISSOURI RIVER Virgelle (at)(21)	Apr-Sept	4840 4200	118 118	•	4116 3557
1100	JUDITH RIVER Utica (near)	Apr-July Apr-Sept	54.0	161		33.5
1350	MISSOURI RIVER	Apr-July	50.0	161		31.1
1150	Zortman (near)(21)	Apr-Sept Apr-July	5400 4600	118 118		4508 3878
1155	N. FORK MUSSELSHELL RIVER Delpine (near)	Apr-Sept Apr-July	8.5 7.1	142 142	4.0 3.5	6.0 5.0
1185	S. FORK MUSSELSHELL RIVER Martinsdale (above)	Apr-Sept Apr-July	66.0 63.0	135 135	44.2 42.6	48.8 46.6

⁽¹⁶⁾ Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.

⁽¹⁷⁾ Adjusted for storage in Gibson Reservoir and diversions.

⁽¹⁸⁾ Adjusted for storage in Canyon Ferry Reservoir.
(19) Adjusted for storage in Two Medicine Res. & diversions into Two Medicine Canal.

⁽²⁰⁾ Adjusted for storage in Two Medicine, Four Horns, Lake Frances & Swift Res.

⁽²¹⁾ Adjusted for storage in Canyon Ferry and Tiber Reservoirs.



WATER SUPPLY FORECASTS

					(1000	Acre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	D FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	MISSOURI RIVER					
1320	Ft. Peck Dam (below)(22)	Apr-Sept	5150	116		4422
	MILK RIVER	Apr-July	4500	116		3894
1350	Eastern Crossing (at)	Apr-Sept	215	86	254	250
	MISSOURI RIVER					
1770	Wolf Point (near)(22)	Apr-Sept	5500	113		4879
	MISSOURI RIVER	Apr-July	4890	113		4317
3300	Williston, N.D. (nr.)(29)	Apr-Sept	12300	111		11059
		Apr-July	10300	111		9828
	*					
	SASK	ATCHEWAN RI	VER BASIN			
	ST. MARY RIVER					
0175	Babb (near)(30)	Apr-Sept Apr-July	650 560	132 132		491 424
		whi anth	200	100		may

⁽²²⁾ Adjusted for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs. (29) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill, Boysen and Yellowtail Reservoirs.

⁽³⁰⁾ Adjusted for storage in Lake Sherburne.



WATER SUPPLY FORECASTS

(1000 Acre Feet)

AS OF APRIL 1, 1967

			-		(1000	Acre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	D FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
		YELLOWSTONE :	RIVER BASI	<u>EN</u>		
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	Apr-Sept Apr-July	2200 1840	117 117	1494 1250	1877 1572
	YELLOWSTONE RIVER		+			
1925	Livingston (near)	Apr-Sept Apr-July	2550 2120	120 120	1628 1354	2127 1770
1935	SHIELDS RIVER Clyde Park (at)	Ann Font	7 20	7.20	60 2	00.0
エフシン	Clyde Fark (at)	Apr-Sept Apr-July	138 128	1 <i>3</i> 9 1 <i>3</i> 9	68.3 65.8	99.0 92.2
	BOULDER RIVER				0,00	, 100
2000	Big Timber (at)	Apr-Sept Apr-July	445 416	130 130	229 220	343 321
	STILLWATER RIVER					
2050	Absarokee (near)(25)	Apr-Sept Apr-July	700 590	127 127	434 360	552 465
	CLARKS FORK RIVER	3				
2075	Chance (at)	Apr-Sept Apr-July	670 607	115 115	431 389	583 528
	CLARKS FORK RIVER	Apr -oury	007	(المسلم	209)20
2085	Edgar (at)	Apr-Sept	690	114	430	609
	ROCK CREEK	Apr-July	600	114	379	538
2095	Red Lodge (near)	Apr-Sept	142	138	91.4	103
		Apr-July	110	138	69.1	79.6
2145	YELLOWSTONE RIVER Billings (at)	Ann-Sont	1050	10/	2938	3913
Kdeby)	prinings (80)	Apr-Sept Apr-July	4850 4140	124 124	2516	3362
	BIG HORN RIVER			·		
2870	St. Xavier (near)(26)	Apr-Sapt	1430	85 85	636 = 01	1677
	YELLOWSTONE RIVER	Apr-July	1340	67	584	1568
3090	Miles City (at)(27)	Apr-Sept	6400	110		5778
	VELLORGE DIVER	Apr-July	5600	110		5080
3295	YELLOWSTONE RIVER Sidney (near) (27)	Apr-Sept	6410	110		5850
		Apr-July	5740	110		5230

(27) Adjusted for storage in Buffalo Bill, Boysen and Yellowtail Reservoirs.

⁽²⁵⁾ Adjusted for storage in Mystic Lake.

⁽²⁶⁾ Adjusted for storage in Buffalo Bill, Boysen, Bull Lake and Yellowtail Reservoirs.



			(URRENT DATA		PAST	t Inches
	SNOW COURSE		DATE	SNOW DEPTH	WATER CONTENT	WATER	CONTENT
10.	NAME	ELEVATION	SURVEY	DE1 111	CONTENT	LAST YEAR	AVERAGE
		COLUMBIA	RIVER BA	SIN			
TENA:	I RIVER						
B11 B16 B15 A04 10 12A 11 411 43 33 20B 32 10B 10A 401 8A 20A 41	Baree Creek Baree Midway Baree Trail Brush Creek Fernie Field Glacier Graves Creek Gray Creek Kicking Horse Kimberley Marble Canyon Morrissey Ridge New Fernie Red Mountain Sinclair Pass Sullivan Mine Upper Elk River Weasel Divide	5500 4600 3800 5000 3500 4200 4100 4300 5100 5400 5000 6100 4100 6000 4500 5100 4400 5450	3/31 3/31 3/31 3/39 3/31 3/39 3/31 3/31	148 120 30 44 35 32 114 67 79 65 27 57 107 68 74 33 61 29 124	59.6 48.0 9.4 15.0 10.6 9.3 25.3 26.1 27.5 27.5 27.1 20.4 20.4 53.0	45.0 35.0 9.6 12.8 8.7 4.6 30.4E 17.4 20.3 13.6 6.9 13.1 16.1 20.0 5.3 13.7 6.5 31.2	50.5
THEAL	ORIVER						
803 111 803 117 802 804 809 812 803 813 805 805 801 801 805	Bassoo Peak Beaver Lake Big Creek Camp Misery Desert Mountain Fatty Creek Griffin Creek Divide Gunsight Lake Hell Roaring Divide Holbrook Kishenehn Logan Creek Marias Pass Minaral Creek North Fork Jocko Spotted Bear Mountain Trinkus Lake Twin Creeks Upper Holland Lake	5150 5900 6750 6400 5600 5500 5150 6300 5770 4530 3890 4300 5250 4000 6330 7000 6100 3580 7000	3/27 4/2 3/29 3/31 3/29 3/29 3/29 3/29 3/29 3/30 3/29 3/30 4/3 4/3	38 78 134 161 61 84 45 135 110 37 35 35 368 75 152 57 139 40 114	13.1 31.1 55.2 64.2 20.9 31.0 15.8 54.4 45.7 14.8 10.9 9.7 24.3 25.4 58.2 25.3 59.6 16.2 47.4	13.2 21.6 37.0 40.6 14.8 20.3 9.9 38.9 29.2 10.6 6.8 18.1 36.6 13.4 39.4 12.8 31.0	13.4* 46.4 43.0* 16.9 21.7* 14.3* 32.3 10.4* 10.4 9.5 20.1 22.9 46.7 15.5 44.2* 12.1* 36.3*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE



AS OF APRIL 1, 1967

		70 01 232	CURPONT DATA			(Inches)		
1	2421 22422			CURRENT DATA		Y PAST RECORD		
	SNOW COURSE		DATE OF	S N OW DEPTH	WATER		CONTENT	
10.	NAME	ELEVATION	SURVEY			LAST YEAR	AVERAGE	
LADK F	ORK RIVER							
Ana I	Olka Itasyalit							
3C13	Black Pine	7100	3/28	47	16.8	10.5	14.6*	
1C13	Black Pine Pillow	7100	3/28	SP	16.4	10.9		
1B10	Copper Creek	5700	3/31	58	22.8	13.2	-	
!B11	Cotter Mine	6250	3/31	66	26.0	15.5	===	
B10	Coyote Hill	4200	3/30	37	12.8	5.9	11.0	
BC09	El Dorado Mine	7800	3/31	81	23.6	15.4	22.6*	
3C11	Fred Burr Pass	8000	3/28	79	30.0	18.2	29.0*	
3010	Gold Creek Lake	7200	3/31	59	18.8	12.4	17.0*	
4010	Heart Lake Trail	4800	3/27	75	28.0	23.4	abs (0 V)	
5010	Hoodoo Basin	6000	3/27	147	56.9	~ J O ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		
ic10	Hoodoo Basin Pillow	6000	4/1	SP	54.8	6000	555	
15001	Hoodoo Creek	5900	3/27	141	53.4	42.6	53.4	
13004	Intergaard	6450	3/31	38	11.8	5.6	8.5*	
15B02	Lookout	5250	3/30	114	40.8	34.3	40.5	
13021	Lubrecht Forest No. 3	5450	3/29	29	7.4	5.0	8.2*	
13022	Lubrecht Forest No. 4	4650	3/29	11	2.8	0.8		
13008	Lubrecht Forest No. 6	4040	3/29	8	2.3		3.5*	
13012	Red Lion	7100	3/28		18.2	0.6	3.5*	
13003	Skalkaho Summit	7260	3/30	52 82		11.4	17.5*	
13002	Slide Rock Mountain	7200	3/29		30.8	20.4	27.4	
13005	Southern Cross			49	16.8	13.2	16.0	
13018		6500	3/31	33	10.5	4.8	7.0*	
13007	Spring Gulch	6000	3/27	38	12.9	8.7	12.5*	
13006	Storm Lake	7780	3/27	48	15.5	9.8	15.5	
13001	Stuart Mill	6500	3/31	32	10.2	4.7	7.5*	
13001 14B01	Stuart Mountain	7400	3/27	88	35.4		32.6	
ahDV2	TV Mountain	6800	3/26	59	20.6	17.0	18.7*	
BITTERR	OOT RIVER							
207 (4.3	(a at a	0/01	à 100ma		5 A A		
3016	Ambrose	6480	3/26	47	15.4	12.8	14.3*	
3D01	East Fork R. S.	5400	3/26	24	7.0	5.4	7.7	
.3D02	Gibbons Pass	7100	3/28	64,	26.2	15.4	25.0	
4D03	Kit Carson	5020	3/31	30	10.6	6.6	9.0	
4C05	Lolo Pass	5230	3/27	94	37.8		36.4*	
4007	Lost Horse	5940	3/28	93	34.5	22.8	35.6*	
3D16	Moose Creek	6200	3/31	50	18.4	10.4	17.1	
4D02	Nez Perce Camp	5680	3/31	49	17.4	10.5	15.8	
AD01	Nez Perce Pass	6570	3/31	52	19.4	13.1	18.3	
3D22	Saddle Mountain	7940	3/30	80	28.4	18.4		
14CO4	Savage Pass	6600	3/27	85	32.0	25.9	30.5*	
14008	Twin Lakes	6510	3/28	119	46.3	30.8	46.7*	

P - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE



AS OF APRIL 1, 1967

		AS OF API	XIL 1, 19	67			tinchesi
		(URRENT DATA		PAST	RECORD
	SNOW COURSE		DATE OF	SNOW DEPTH	WATER	WATER	CONTENT
10.	NAME	ELEVATION	SURVEY		<u> </u>	LAST YEAR	AVERAGE
		MISSOURI	RIVER BA	SIN			
AVERI	HEAD RIVER						
D10 E11 E03 D04 E22 3D15 3D09 1E12 1E04 1E03 JE01 1E23 1E02	Bloody Dick Blue Ledge Mine Camp Creek Carter Creek Dad Creek Lake Elk Horn Springs Gold Stone Kilgore Lakeview Canyon Lakeview Ridge Lemhi Pass Lemhi Ridge Trail Creek	7600 6700 6800 7400 8400 7800 8100 6200 6930 7400 7480 8100 7090	3/31 4/1 3/31 3/30 3/30 3/30 3/30 3/30 3/30	41 63 40 42 61 34 51 36 56 37 36	12.4 23.0 12.0 9.4 17.4 10.0 16.6 11.1 17.5 16.7 9.4 10.0 9.3	7.2 11.7 6.7 4.2 10.3 6.6 10.1 6.8 9.8 5.6	11.7 16.7 10.4 10.4 15.3 10.0 10.8 9.7 9.2
RUBY RI	White Pine Ridge	8850	3/30	32	5.2	2.3	5.9
	7.17.17						
11D08 12E07 12E06	Clover Meadow Divide Notch	8600 7900 8500	3/31 3/31 3/31	77 49 67	21.7 13.1 18.7	12.9 7.6 12.7	=
BIG HOI	E RIVER						
13D2O 13D19 13D21 13D08	Abundance Lake Darkhorse Lake Foolhen Jahnke Creek	8800 8600 8280 7340	3/28 3/30 3/28 3/31	59 77 61 37	21.2 31.0 21.5 10.8	18.6	11.2
EFFER,	SON RIVER						
12007 12009 12010 12006 12001	Berry Meadow Copper Mountain Nez Perce Creek Picnic Grounds Pipestone Pass	7300 7700 6500 6500 7200	3/30	33 47 30 23 25	10.2 13.4 8.7 6.1 7.0	9.0 2.4	7.8* - 4.8* 6.2
MADISOI	N RIVER						
11E09 11D07 11D12 11E25 11E26	Big Springs Call Road Four Mile Freezeout Lake Freezeout Mountain	6500 8050 6900 7200 8250	3/29 3/31 3/29 3/22 3/22	74 54 39 39 64	26.7 14.7 8.9 10.8 20.4	8.4 5.8 7.1	22.6

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE



			10 OI A	That by b				(Inches)	
-		0,001,000,000			URRENT DATA		Y PAST RECORD		
1	HA	SNOW COURSE	£1 £1/4=10#	DATE OF	SNOW Depth	WATER CONTENT		CONTENT	
J,	10.	NAME	ELEVATION	SURVEY			LAST YEAR	AVERAGE	
1	ADISON	RIVER (continued)							
	1E05 1E10 1D05 1E22 1E28 1D11 1E23 0E02 1D03 1E21 1E20 1E24 1E27 1E08	Hebgen Dam Island Park Jack Creek Lake Creek Lion Mountain Pillow Lower Twin Meridian Creek Norris Basin North Meadow Potomageton Park Sentinel Creek Tepee Creek Upper West Fork Valley View West Yellowstone	6550 6315 7500 6100 8760 7900 7500 7500 7500 7150 8300 8000 8750 6500 6700	3/28 3/29 3/28 3/23 3/29 3/29 3/29 3/31 3/29 3/28 3/28	39 56 25 31 37 38 47 40 59 568 69 53	13.3 19.6 7.8 9.8 19.8 21.2 10.8 13.6 9.0 21.0 32.1 17.2 19.1 25.2 17.0	7.2 11.5 6.2 16.2 16.5 6.3 11.2 11.2 11.3 11.3 11.3 11.3 11.3 11	12.2 17.6 6.9* 9.9* 9.4*	
	leo7 allatii	West Yellowstone Pillow N RIVER	6700	3/28	SP	14.2	ermin.	<u>@E</u>)	
مرا	0D14 1D09 0D15 1E29 0D04 0D03 0D13 1D10 0D18 0D01 0D16 1D13 1E06	Arch Falls Bear Basin Bridger Bowl Pillow Carrot Basin Pillow Devil's Slide Hood Meadow Lick Creek Pillow Little Park Maynard Creek Pillow New World Shower Falls Pillow Taylor Peaks Pillow Twenty-One Mile	7350 8150 7250 9000 8100 6600 6860 7400 6210 6700 8100 8500 7150	3/30 3/29 3/31 3/22 3/30 3/24 3/29 3/31 4/3 3/30 No rep 3/27	53 79 SP SP 83 46 SP 63 SP 44 SP ort 66	16.8 25.1 32.8 36.3 26.8 13.4 14.1 19.4 14.4 16.2 27.4	9.3 14.3 21.8 16.4 6.2 7.0 10.7 9.0 20.3	12.1* 20.4* 22.3 10.0 14.8* 10.8	
	ISSOURI 1001	I RIVER (Main Stem)	50 ° 0	2/00	60	07 7	7 / <i>"</i> 7	7 E & &	
	2005 0009 0007 0002 0001 9A01 2001 2002 3003 2004	Boulder Mountain Chessman Reservoir Deadman Creek Elk Peak Grasshopper Kings Hill Rocky Boy Stemple Pass Ten Mile Lower Ten Mile Middle Ten Mile Upper	7950 6200 6450 8000 7000 7500 5200 6600 6600 6800 8000	3/28 3/29 3/31 3/29 3/30 3/27 4/1 3/30 3/29 3/28 3/28	62 20 50 68 34 59 31 47 32 40 45	21.1 5.6 16.8 22.2 7.8 19.4 8.1 15.4 10.2 13.3 15.1	14.7 1.2 7.0 13.7 3.5 10.1 3.3 8.3 7.0 9.3	15.5* 4.9 15.8* 5.7 13.6 4.3 11.0 7.2 11.2 14.3	

SP - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE



					(inches)		
N/				CURRENT DATA		PAST	RECORD
	SNOW COURSE		DATE OF	SNOW DEPTH	WATER CONTENT	WATER	CONTENT
10.	NAME	ELEVATION	SURVEY		CONTENT	LAST YEAR	AVERAGE
M-TETO!	N-MARIAS RIVERS						
3A15 2B06 2B09 2A01 2B07 2B04 2B03	Badger Pass Cabin Creek Five-Bull Freight Creek Goat Mountain Wrong Creek Wrong Ridge	6900 5200 5700 6000 7000 5700 6800	4/2 4/2 4/2 4/2 3/31 4/2 4/2	111 36 32 57 47 52 67	43.3 14.4 12.1 23.3 15.6 21.6 28.4	34.2 7.4 6.3 15.4 9.1 15.6 19.9	7.0* 7.1* 17.0 12.3 15.8* 22.2*
WITH R	IVER						
9002 9001 9003 10006 10006	Avalanche Crystal Lake Rock Creek Spur Park Spur Park Pillow	7100 6100 5600 8000 8000	4/5 3/31 3/31 3/31 3/31	84 56 43 89 SP	30.9 19.1 12.3 31.3 29.9	16.3 7.2 5.1 16.4	12.2
SASKATCHI	EWAN (Bow River)						
LB. 1 LB. 2 LB. 5 LB. 6 LB. 8 LB. 10	Bow River North Course Lake Louise Mirror Lake Misc. Lake Louise Mount Eisenhower	5100 5400 5800 6600 5700 5000	3/30 3/30 3/29 3/29 3/29 3/28	53 52 57 63 56 32	17.2 17.1 18.2 21.2 18.8 8.2	8.4 7.6 10.3 10.8 8.9 5.0	9.2 9.1 10.9 13.1 11.7
ST. MARY	RIVER						
13418	Hudson Bay Divide	5800	3/29	65	23.6	15.9	ess;

SP - Snow pillow observation - water content only.



SNOW COURSE DATE OF SURVEY SNOW DEPTH WATER CONTENT LAST YEAR	RECORD
NAME ELEVATION OF SURVEY DEPTH CONTENT LAST YEAR	
PER YELLOWSTONE RIVER	CONTENT
005 Bald Ridge 7500 3/28 46 15.6 10.0 101 Camp Senia 7890 4/3 34 10.1 4.4 103 Canyon 7750 3/30 63 21.7 13.0 1007 Cooke Station 8150 3/31 77 26.7 13.3 1005 Crevice Mountain 8400 3/30 44 14.1 6.2 1006 East Entrance 7000 3/31 30 10.0 5.0 1006 Fisher Creek 9100 3/31 133 51.4 33.6 1005 Grizzly Peak 8400 3/30 62 20.3 12.0	AVERAGE
CO5 Bald Ridge 7500 3/28 46 15.6 10.0 DO1 Camp Senia 7890 4/3 34 10.1 4.4 E03 Canyon 7750 3/30 63 21.7 13.0 D07 Cooke Station 8150 3/31 77 26.7 13.3 D05 Crevice Mountain 8400 3/30 44 14.1 6.2 E06 East Entrance 7000 3/31 30 10.0 5.0 D06 Fisher Creek 9100 3/31 133 51.4 33.6 9D05 Grizzly Peak 8400 3/30 62 20.3 12.0	
DO1 Camp Senia 7890 4/3 34 10.1 4.4 E03 Canyon 7750 3/30 63 21.7 13.0 D07 Cooke Station 8150 3/31 77 26.7 13.3 D05 Crevice Mountain 8400 3/30 44 14.1 6.2 E06 East Entrance 7000 3/31 30 10.0 5.0 D06 Fisher Creek 9100 3/31 133 51.4 33.6 906 Fisher Creek Pillow 9100 3/31 SP 47.7 - 905 Grizzly Peak 8400 3/30 62 20.3 12.0	
DO1 Camp Senia 7890 4/3 34 10.1 4.4 E03 Canyon 7750 3/30 63 21.7 13.0 D07 Cooke Station 8150 3/31 77 26.7 13.3 D05 Crevice Mountain 8400 3/30 44 14.1 6.2 E06 East Entrance 7000 3/31 30 10.0 5.0 D06 Fisher Creek 9100 3/31 133 51.4 33.6 906 Fisher Creek Pillow 9100 3/31 SP 47.7 - 905 Grizzly Peak 8400 3/30 62 20.3 12.0	11.7*
E03 Canyon 7750 3/30 63 21.7 13.0 D07 Cooke Station 8150 3/31 77 26.7 13.3 D05 Crevice Mountain 8400 3/30 44 14.1 6.2 E06 East Entrance 7000 3/31 30 10.0 5.0 D06 Fisher Creek 9100 3/31 133 51.4 33.6 906 Fisher Creek Pillow 9100 3/31 SP 47.7 - 905 Grizzly Peak 8400 3/30 62 20.3 12.0	6.3
### ### ##############################	16.3
D05 Crevice Mountain 8400 3/30 44 14.1 6.2 E06 East Entrance 7000 3/31 30 10.0 5.0 D06 Fisher Creek 9100 3/31 133 51.4 33.6 906 Fisher Creek Pillow 9100 3/31 SP 47.7 - 905 Grizzly Peak 8400 3/30 62 20.3 12.0	2000
### ##################################	9.5
### ### ### ### ### ### ### ### ### ##	11.3*
906 Fisher Creek Pillow 9100 3/31 SP 47.7 - 905 Grizzly Peak 8400 3/30 62 20.3 12.0	مطبطه و کاراند
9005 Grizzly Peak 8400 3/30 62 20.3 12.0	520
	15.7*
0006 Independence 8000 3/24 69 24.9 13.1	19.2*
0E04 Lake Camp 7850 3/29 45 14.0 6.2	11.1
9E01 Lodgepole 8200 3/31 46 15.0 7.3	11.8*
MO1 Lupine Creek 7300 3/28 49 15.2 7.8	11.2
D12 Monument Peak 9000 3/24 94 33.8 19.3	23.0*
1007 Northeast Entrance 7400 4/3 37 14.0 4.6	9.3
10007 Northeast Entrance Pillow 7350 3/29 SP 12.2 -	
10003 Porcupine R.S. 6500 3/28 31 9.4 6.3	7.7
10010 Sacajawea 6550 3/31 55 17.2 11.8	13.0*
10008 South Fork Shields 8100 3/28 80 29.6 21.2	etain)
1005 Sylvan Pass 7100 3/31 49 15.0 10.0	14.9
10E07 Thumb Divide 7900 3/30 76 26.8 21.1	24.2
9004 Timberline Creek 8850 4/3 59 23.0 11.4	14.1*
9D02 West Rosebud 7500 3/31 49 20.8 -	4000,
9D08 White Mill 8700 3/31 102 36.6 -	

SP - Snow pillow observation - water content only.



SOIL MOISTURE DATA AS OF APRIL 1, 1967

		AS OF	APRIL	1, 1967	,			(Inches)
			SOIL P	ROFILE	CURRENT	DATA	PAST	RECORD
	SOIL MOISTURE STATION	51.511.510.11	DEPTH	FIELD CAPACITY	DATE OF	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION		CATACTIT	SURVEY	MOTSTORE		
		COLUMBIA	A RIVER	BASIN				
Veetenas								
Kootenai 15B15M	Baree Trail	3800	48	7.5	3/31	5.2	7.6	cost
14A10M	Murphy Lake R.S.	3000	48	22.6	4/2	21.9	22.2	2000
15A02M	Raven R.S.	3050	48	23.0	4/3	22.2	22.2	
Flathead					,			-
13A02M	Desert Mountain	5600	54	8.4	3/31	8.2	7.4 5.8	7.4 5.5
13A05M	Marias Pass	5250	54	6.5	3/31	5.5	7.0	202
Clark For	<u>·k</u>				- /	~ 0	~ 0	
13C13M	Black Pine	7100	48	10.0	3/28 3/27	7.9 5.1	5.9 3.6	3.5
13C15M 13B19M	Georgetown Lake Seeley Lake R.S.	6450 4030	48 48	9.0 11.9	4/4	10.4	12.4	8.5
13CO3M	Skalkaho Summit	7260	48	10.8	3/30	9.9	10.0	a
	,							
Bitterroom 13D18M	<u>ot</u> Gibbons Pass	7100	48	7.1	3/26	4.8	5.0	5.4
14CO5M	Lolo Pass	5250	48	10.6	3/27	4.0	6.2	6.2
		MISSOUR	I RIVE	R BASIN				
Beaverhea				2 2	, />	6.57	6 1	9.3
llE13M	Lakeview	6700	48	15.3	4/5	6.7	6.4	702
Madison					,		2 0	0 /
10D04M	Red Bluff	4800	40	4.7 6.5		2.4 2.6	2.3	2.4
11E07M	West Yellowstone	6700	48	0.5	2/20	≈ ∘ ∪		
Gallatin			1 <i>0</i> 1	7 × A	2/23	7 E Ó	16.7	=
10D15M	Bridger Bowl	7250 4856	48 54	15.8 14.5	3/31 3/31	15.2 14.6	13.8	11.4
11DO2M 10D13M	College Site Lick Creek	4850 6860	48	18.8	3/27	19.1	14.8	ec et
11E06M	Twenty-One Mile	7150	48	10.0	3/28	2.8	3.0	2.8
Micasso	Main Stem							
10C01M	Kings Hill	7420	48	11.8		4.8	8.8	8.2
12C08M	Stemple Pass	6230	48	5.9	3/31	4.0	5.2	4.7
<u>Yellowst</u>	one							70 (
lodilw	Battle Ridge	6020	48	17.6	· / .	15.2	14.8	13.6
10D07M	Northeast Entrance	7350	48	9.4	4/4	407	1.0 4	, 0

^{**}AVERAGE FOR PERIOD OF RECORD



RESERVOIR STORAGE DATA

AS OF MARCH 31, 1967

1		AS OF	MARCH 31,	1967	((1000 Acre Feet)
					USEABLE STORAGE	
	BASIN	RESERVOIR	USEABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
	LUMBIA RIV	ER BASIN				
	athead	Hungry Horse Flathead Lake Camas (Sum of 4) Mission Valley (Sum of 8)	3,428.0 1,791.0 45.2 100.3	1,551.0 731.3 27.1 26.4	2,214.0 650.4 31.0 63.6	
1	ark Fork	Georgetown Lake Noxon Rapids	31.0 334.6	19.3	24.0	21.8
i	tterroot	Como Painted Rocks	34.9 31.7	11.8 15.2	16.2 14.5	13.4 14.1**
M	SSOURI RIV	ER BASIN				
	averhead by	Clark Canyon Lima Ruby	328.9 84.0 38.8	115.0 14.0	156.3 47.3	27.3 26.1**
Ma	dison	Hebgen Lake Ennis Lake	377.5 41.0	195.1 39.4	222.3 39.2	179.1 36.4
	llatin ssouri	Middle Creek Canyon Ferry Hauser & Helena Lake Helena	8.0 2,043.0 61.9 10.4	3.5 1,028.0 61.3 10.2	2.4 1,506.0 60.7 10.0	3.9** 1,529.0** 44.6 5.6
		Holter Lake Smith River Ackley Lake	81.9 10.7 5.8	80.6	80.0	6.5** 3.5
		Durand Martinsdale Deadman's Basin Fort Peck	7.0 23.1 72.2	4.2 7.4 45.8 15,700.0	6.1 12.4 68.8 16,830.0	4.9 8.7 41.6** 10,875.4
วันเ		Gibson Willow Creek Pishkun	*	24.3	52.6	60.6 21.0
la:	rias	Lower Two Medicine Four Horns Swift	19.2	11.6	12.0	23.9
ſi.	<u>lk</u>	Lake Frances Tiber Fresno	112.0 1,347.0 127.2	72.1 466.4 134.9	93.7 724.7 119.9	647.4** 81.5
e.	llowstone	Nelson Lake Sherburne Mystic Lake	66.8 66.1 20.8	49.8 21.4 4.4	15.4	24.4 4.8
	g Horn	Tongue River Cooney Yellowtail	68.0 27.5	42.7 14.5 698.1	43.4	
-		T 0 7 T 1 M 1 C 7 7	1,356.0	070.7	207.0	



Agencies Cooperating in Collecting Data Contained in this Bulletin

- U. S. Forest Service Region 1, Missoula, Montana
- U. S. Geological Survey Helena, Montana
- U. S. Army Corps of Engineers Portland, Oregon Seattle, Washington Omaha, Nebraska
- U. S. Indian Irrigation Service St. Ignatius, Montana
- U. S. Weather Bureau Helena, Montana
- U. S. Bureau of Sports Fisheries and Wildlife Red Rock Lakes Refuge Monida, Montana
- U. S. Bureau of Reclamation Billings, Montana Boise, Idaho
- U. S. Soil Conservation Service Montana, Wyoming, Idaho
- Soil and Water Conservation Districts Montana Counties
- U. S. Bonneville Power Administration Portland, Oregon

- U. S. National Park Service Yellowstone National Park Glacier National Park
- Montana Power Company Butte, Montana
- State Water Conservation Board Helena, Montana
- North Montana Branch Station Agricultural Experiment Station Havre, Montana
- Montana State University
 Agricultural Experiment Station
 Bozeman, Montana
- University of Montana School of Forestry Missoula, Montana
- Johnson Flying Service, Inc. Missoula, Montana
- Water Rights Branch, Dept. of Lands and Forests Victoria, British Columbia
- Department of Northern Affairs and National Resources Calgary, Alberta

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE P. O. Box 98

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